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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,847	02/05/2004	Dennis M. O'Connor	ITL.1806US (P15392)	7172

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EXAMINER	
BATAILLE, PIERRE MICHE	
ART UNIT	**PAPER NUMBER**
2186	

MAIL DATE	DELIVERY MODE
12/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/773,847	O'CONNOR, DENNIS M.	
	Examiner	Art Unit	
	Pierre-Michel Bataille	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is taken in response to Applicant's communication filed October 17, 2007 responding to Final Rejection dated February 07, 2007. Applicant's amendments and/or arguments have been considered with the results that follow.

2. Claims 1-24 are pending the application under prosecution.

Response to Arguments

3. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2002/0062434 (Chauvel).

With respect to claim 1, Chauvel teaches the invention as claimed, memory management unit configured to receive a virtual address and provide a corresponding physical address **[(Known process or MMU (memory management unit) where several separate processing devices perform virtual address translation in order to access the physical memory) Par. 0007]**, the memory management unit

comprising: an antenna ***(general principle of hand held devices, i.e. inherent in all above noted appliances)***; a storage containing one or more virtual address-to-physical address translations **[TLB (translation lookaside buffer) provided as part of the MMU (memory management unit) caching recently accessed memory locations) Par. 0007]**; conversion logic to generate a modified virtual address from the virtual address if a virtual address-to-physical address translation for the virtual address does not exist in the storage **[(upon a TLB miss, unique requester identifier concatenated to a virtual address to form a modified virtual address, a starting base address in the external memory translation table] Par. 0008 & 0007]**; and a page table walk unit configured to convert the modified virtual address into the corresponding physical address **[(when a TLB (translation lookaside buffer) cache does not contain the information corresponding to the current access (i.e., a TLB-"miss" or "page fault"), the information must be retrieved from tables ("table walking"), located in main memory) Par. 0007]**.

With respect to claims 2-3, Chauvel teaches the invention as claimed, the memory management unit wherein the conversion logic is configured to replace one or more bits of the virtual address with a process identifier if the one or more bits comprises a predetermined value **[(virtual address records and corresponding descriptor records include a resource identifier (R_ID) field, a task identifier (Task_ID) field, used to invalidate entry associated with specific tasks, the task**

identifier identifies all entries in a TLB belonging to a specific task) Par. 0032 & 0031].

With respect to claim 4, Chauvel teaches the invention as claimed, the memory management unit wherein the memory management unit is configured to receive the virtual address from an arithmetic logic unit **[(digital signal processor, multiprocessor logic capable of computing) Par. 0024-0026]**.

With respect to claim 5, Chauvel teaches the invention as claimed, the memory management unit wherein the memory management unit is configured to receive the virtual address from an incrementor **[(digital signal processor, multiprocessor logic capable of computing) Par. 0024-0026]**.

With respect to claim 6, Chauvel teaches the invention as claimed, the memory management unit wherein the virtual address comprises a data address **[(virtual address records and corresponding descriptor records include a resource identifier (R_ID) field, a task identifier (Task_ID) field, used to invalidate entry associated with specific tasks, the task identifier identifies all entries in a TLB belonging to a specific task) Par. 0032 & 0031]**.

With respect to claim 7, Chauvel teaches the invention as claimed, the memory management unit wherein the virtual address comprises an instruction address **[(virtual address records and corresponding descriptor records include a resource identifier (R_ID) field, a task identifier (Task_ID) field, used to invalidate entry**

associated with specific tasks, the task identifier identifies all entries in a TLB belonging to a specific task) Par. 0032 & 0031].

With respect to claim 8, Chauvel teaches the invention as claimed, the memory management unit wherein the one or more virtual address-to-physical address translations are invalidated upon updates to a process identifier **[(virtual address records and corresponding descriptor records include a resource identifier (R_ID) field, a task identifier (Task_ID) field, used to invalidate entry associated with specific tasks, the task identifier identifies all entries in a TLB belonging to a specific task) Par. 0032 & 0031]**.

With respect to claim 10, Chauvel teaches the invention as claimed, the memory management unit wherein the storage is configured to store one or more most recently generated virtual address-to-physical address translations **[(virtual address records and corresponding descriptor records include a resource identifier (R_ID) field, a task identifier (Task_ID) field, used to invalidate entry associated with specific tasks, the task identifier identifies all entries in a TLB belonging to a specific task) Par. 0032 & 0031]**.

With respect to claims, the claims correspond in scope to claims 1-24; therefore, the claims are rejected under the same assumption.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (571) 272-4178. The examiner can normally be reached on Mon, Tue-Fri (8:00A to 5:30P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pierre-Michel Bataille
Primary Examiner
Art Unit 2186